

Abstract of the Disclosure

NANOCOMPOSITE OF ELASTOMER AND DISPERSION THEREIN
OF INTERCALATED CLAY PREPARED IN AN AQUEOUS MEDIUM
WITH FUNCTIONAL ELASTOMER

This invention relates to nanocomposites comprised of a functionalized elastomeric polymer, including oligomers which are elastomeric, which contains a particulate dispersion therein of an intercalated, and at least partially exfoliated, swellable clay, such as for example montmorillonite clay. Said clay may be pre-intercalated and thereafter blended with, or intercalated and at least partially exfoliated in situ within, a functionalized elastomer in an aqueous medium, wherein said functionalized elastomer contains at least one functional group selected from acid, acid-salt, anhydride, and protonated amine-modified epoxy groups. The invention further relates to articles of manufacture, including industrial belts and tires, having at least one component comprised of such nanocomposite where such component may be a coating thereon or other integral component. Such tire component may be, for example, a tire tread, tire sidewall and/or tire innerliner.

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